



Nebraska Department of Agriculture BUREAU OF ANIMAL INDUSTRY NEWSLETTER

Sound Science

By Dr. Larry Williams

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I feel somewhat compelled to write "something" as I leave the ranks of regulatory veterinary medicine. Rather than attempt to make a statement regarding the things I have learned working as a State employee at the service of the livestock industry, I think I prefer to write about what's itching my hide at this moment. And, that is the apparent explosion of people claiming to use "sound science" as the basis for their arguments.

Sound science; the term is loosely used in today's political climate, apparently, because the addition of "sound" to science, makes science more credible; but does it, really? Should we believe, without question, the person touting "sound science" as the foundation for his/her case? The more basic question might be, why do we believe what we believe? Why is it easier to believe negative statements regarding government and politicians, especially, when the government is federal and the politician is of the opposite party?

Recently, Michael Crichton, in an editorial in the *Omaha World Herald*, was credited with the following statements:

People are never bored with fear mongering. What people get bored with is taking the time and making the effort to assess the claims, charges, or headlines that frighten them. It is only when a person examines the facts that it becomes clear this was a phony fright, drummed up by repetition and volume rather than scientific fact.

I think he hit the nail squarely on the head. To keep things in perspective, we need to listen carefully to what people are saying and try to understand if there is a bias for saying it.

Take BSE, for instance, and the current trade issues with Japan and Canada, and listen carefully to the debate for opening, or not opening, trade with our previously valued trade partners. Proponents of both sides of the issue are touting sound science, but if the science were sound, wouldn't we be working together, not fighting one another and dragging issues through the courts for the courts to decide? Are the arguments made by R-CALF to keep the Canada border closed based on sound science as they claim? If so, then is the American Meat Institute's argument to open the border to all ages of cattle completely off base? The USDA, caught squarely in the middle of the controversy, also claims to apply sound science as its basis for proposed regulations for reopening trade. The National Cattle and Beef Association (NCBA), although not always in agreement with USDA policy, seems in line with what the government is proposing in this instance.

Personally, I am confident that the firewalls put up to prevent BSE from entering this country are effective. Even if we are unfortunate enough to have an occurrence of BSE in the U.S., I have confidence in the safeguards put in place to prevent the disease from escalating. However, I am **not** confident that the media and public would handle the occurrence by examining the facts of sound science.

In addition, I believe USDA's claim that the U.S. has the safest food supply in the world. I imagine they would like to do more, but unfortunately, there has to be a balance between what's desired in a utopian world as to what is practical. We often forget that we, as consumers, also have a responsibility when it comes to handling food; we shouldn't expect government to protect us from every form of evil that we might encounter.

All this debate could be tempered by simply applying a bit of the "Golden Rule" to sound science. The U.S. could easily be in Canada's situation; if we were, how would we want to be treated by our trade partners?

To paraphrase Michael Crichton, "We need to examine the facts to determine if the 'sound science' was a phony fright, drummed up by repetition and volume rather than scientific fact." We might summarize our examination by answering which of the categories the "fact" fits. Is it sound science, political science, or junk science?

Too often, it's hard to tell.

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Bovine TB Report

On January 21, 2005, BAI received a report from the National Veterinary Services Laboratory of a tuberculosis positive sample from a lesioned cow killed January 18, at Swift

& Co., Omaha. The 15-year-old cow had been purchased by Swift at Ericson-Spalding Livestock Market on January 15, and had been sold by a producer from Greeley County. This producer had purchased her in 2002 from another Greeley County producer. Testing has been completed in both herds and a total of 30 responders (out of 1,452) have been indemnified, killed, and necropsied. No gross lesions were found in any of the animals and histopathology and acid-fast staining has been negative on all but one of the lymph node samples submitted. That lymph node is being tested further. All samples are also being cultured but results will not be known until late April or early May. If *Mycobacterium bovis* is not cultured from any of the submitted samples, the herds will be retested when they come off pasture in the fall. If *M. bovis* is cultured, epidemiological investigation will continue and adjacent herds and animals traced out of the infected herd(s) will need to be tested. Practicing veterinarians may be involved in some of the testing. (Please see also the JAVMA article on assessing tuberculosis testing in this newsletter.)

veterinarians is needed to reassure international trading partners. The program would establish expectations of the test, communicate those expectations to accredited veterinarians, monitor performance, and follow-up when expectations are not met.

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Premises Identification System

The Nebraska Department of Agriculture (NDA) officially opened the premises identification portion of its Nebraska Animal Verification Enhancement (NAVE) system on September 16, 2004. Those who handle livestock, poultry, and other food animals are encouraged to register the locations where their animals are kept. A premises is a location where animals are kept, or will be kept, and include a number of places, such as farms, ranches, auction markets, and county fairgrounds. The premises registration system can be accessed by Internet at www.animalid.us. System prompts will take those registering through a five-step process. Once complete, the information is electronically forwarded to NDA where its authenticity is verified. There is an option on the web page to download the form for completion and mailing. Those who want to register, but do not have Internet access, can call BAI at 800-572-2437 to receive the registration paperwork. To date, nearly 400 premises have been registered.

Assessing Tuberculosis Testing

Having received the approval of the Executive Board, the AVMA will support the Department of Agriculture's proposal to create a performance standard for the caudal fold tuberculosis test for cattle to assess accredited veterinarians' compliance with expectations. The AVMA will provide support by explaining the need for the program through the Association's communication channels.

Because the caudal fold test's specificity is less than 100 percent, a small percentage of tested cattle will respond, even if they are not infected with *Mycobacterium bovis*, and will, therefore, be reported to a state or USDA veterinarian. If an accredited veterinarian performs a considerable number of tests without reporting any responders, or reports at a substantially lower level than expected, a USDA or state veterinarian will visit the veterinarian, as part of an investigation, and provide that veterinarian with additional education and training.

Currently, the USDA is concerned that there may be an under reporting of TB responders and, consequently, inefficient detection of TB infection. In addition, international trading partners are assessing U.S. surveillance capabilities and performance.

The USDA and AVMA believe that a program to evaluate performance of this test by accredited

Newsletter Update on the Livestock Disease Reporting Regulations

The Nebraska Department of Agriculture (NDA), Bureau of Animal Industry (BAI), is in the process of finalizing the first draft of the Livestock Disease Reporting Regulations. The major points of these regulations are listed below:

- Disease reporting;
- Disease categories and reporting procedures; and
- Emergency conditions.

The Livestock Disease Reporting Regulations should prove beneficial in controlling, tracking, and eradicating a foreign, reportable, or emerging disease in the animal populations of Nebraska.

Livestock Emergency Disease Response System (LEDRS) Corps Update



The development of the federal National Response Plan (NRP) lays out direction for LEDRS Corps activities. In response to a directive to certify emergency responders in Incident Command System levels, the annual summer seminar will provide ICS training to advance the formal process of "certifying" Corps members. Dates scheduled for the seminar/training are July 6 and 7, 2005, at the Kearney Holiday Inn Convention Center. Future activities will continue to advance Corps members forward in certification in specific functions and levels of emergency response.

Recruitment sessions are also being held across the state to broaden state membership in the Corps. Veterinarians, veterinary technicians, and extension educators interested in joining the LEDRS Corps emergency response efforts are encouraged to attend the sessions being held across the state in March through May. Anyone interested in additional information on joining can contact BAI at 800-572-2437.

Johne's Program Update

Results of the recent Nebraska Johne's disease beef herd survey indicate that 12% of the beef herds in Nebraska may be infected. This, in conjunction with the fact that 25% or more of the dairy herds are infected, points out the urgent need for a proactive approach to Johne's disease prevention and management. Our voluntary Johne's disease control program is the perfect vehicle to accomplish this task.

We have gotten off to a good start in the past year. There are now 70 herds enrolled in the program and 33 veterinarians have completed the certification process. We have received increased funding for the 2005-2006 cooperative agreement year, and it looks like we will be awarded a grant to upgrade the Veterinary Diagnostic Center's (VDC) Johne's fecal culturing procedures. This will allow them to perform fecal cultures on liquid media instead of solid. This will shorten the maximum time for results from 16 weeks to 6 weeks and will increase the VDC's capacity from approximately 2,000 samples per year to around 10,000 samples.

At the Johne's Advisory Committee meeting held on February 10, 2005, it was decided to focus our efforts in two areas. The first is centered on producer education, and we are actively pursuing every opportunity to get our message to as many beef and dairy producers as possible. Any help you could give us in setting up meetings would be greatly appreciated. Producer

knowledge of appropriate biosecurity measures will help stop the spread of this costly disease.

The second goal is to concentrate on enrolling as many test negative herds as possible. This will identify sources of replacement animals with a high confidence level that they are not Johne's infected.

We encourage Nebraska practitioners to become Johne's certified so you can participate in this program and offer a valuable service to your clients.

Scrapie Program Update

Scrapie Regulations – On July 22, 2004, a rule-making hearing was held for the Scrapie Control and Eradication Regulations. Since there was no testimony against them, the regulations were sent to the Attorney General's office for approval. Instead, word was received that a portion of the definitions conflicted with those in the scrapie statute, and the regulations were corrected and resubmitted. BAI is presently waiting for approval, at which time another hearing will be scheduled. One of the major components of the regulations is identification. All sheep are required to be identified with official scrapie eartags before leaving the premises of origin, except wethers, lambs nursing their dams, animals moved to another premises owned or leased by the owner of the animals, and animals less than 18 months of age going directly to slaughter, to a terminal feedlot, or through slaughter channels and then to slaughter or a terminal feedlot.



Nebraska Ram Project – BAI has received continuing grant funds from USDA to again offer genetic testing to sheep producers to enhance flock resistance to scrapie. However, there have been some changes in the program since last year. Samples are to be submitted to Gene Seek, which is located in Lincoln. The new submission forms, which are available from our office, have the lab name and address printed on them. Fees for the testing have been prepaid to the lab, and veterinarians will be paid \$10 per sample to collect and submit samples. As before, a copy of the form is to be sent to our office in order to receive payment. Testing is limited to five rams per flock and must be completed by August 1, 2005. All rams being tested must be identified with official scrapie eartags and the flock must have a flock number, assigned by the Veterinary Services office. Contact the BAI office if you have any questions.

Scrapie Guide Available to Veterinarians

A new publication, "A Guide to the National Scrapie Eradication Program for Veterinarians" is available upon request to veterinarians and clinics.

"This publication is an extremely handy, user-friendly reference piece on the National Scrapie Eradication Program and scrapie genetics with the use of genotyping in the eradication program," says Dr. Cindy Wolf, Chair of the National Institute for Animal Agriculture's (NIAA) Sheep and Goat Health Committee.

A copy can be obtained through the NIAA at (270) 782-9798. The guide can also be downloaded on the Internet at www.animalagriculture.org/scrapie.

Pseudorabies Update

The National Pseudorabies Control Board has approved Nebraska's application to remain as a Stage V (Free) status state. All 50 states are now in Stage V, and there is no known commercial swine herds affected by pseudorabies in the U.S. Feral swine remain a threat to the pseudorabies (and swine brucellosis) status of commercial swine in those states where they still exist. During 2004, in the U.S. pseudorabies was disclosed in eight transitional swine herds, which are herds that have known exposure to feral swine. Although they are more common in several of the southern states in the U.S., feral swine have been shown to be present in Nebraska as well. The Nebraska Game and Parks Commission has been working to remove known "herds" of feral swine in several areas of the state. As they are killed, these swine are tested for pseudorabies and swine brucellosis, as well as other diseases. So far, all have been negative. Veterinarians are urged to forward any sightings of feral swine or reports of such, to the BAI office or the Nebraska Game and Parks Commission office.

Commercial Dog and Cat Program

The number of State-licensed commercial breeders continues to rise. As early as last year, south-central Nebraska was the area showing increase of commercial breeders, the trend now shows an expansion of commercial breeders across the entire state of Nebraska.

As of February 1, 2005, the current number of State-licensed facilities stands at 649. A breakdown of these facilities is as follows: commercial breeders (403), boarding kennels (67), dealers



(8), pet shops (86), animal control facilities, and animal shelters (85).

Who qualifies as a commercial breeder?

1. Any person who owns or harbors four or more unaltered dogs or cats; who is engaged in the business of breeding dogs or cats; and who sells, exchanges or leases dogs or cats in return for consideration; or who offers to do so.
2. Any person who sells exchanges or leases 31 or more dogs or cats in a 12-month period shall be considered a commercial breeder.
3. Any person knowingly selling, exchanging, or leasing any dogs or cats for later retail sales or brokered trading.

The program is complaint driven. Last year, 101 complaints were received by the Bureau of Animal Industry. Basis of complaints usually involve unclean facilities, dogs or cats being fed or watered properly, to overcrowding in pens. Inspections on any licensed facility can be done on a routine basis at anytime. License fees are \$150. The license period for commercial breeders, boarding kennels, dealers, and pet shops is April 1 through March 31 of each year. The license period for animal shelters and animal control facilities is October 1 through September 30 of each year.

For inquiries, or to file a complaint, please contact Rick Herchenbach at (402) 563-1875 or (402) 471-6832.

Low-Pathogenic Avian Influenza (LPAI) Program for Commercial Poultry

During the past decade, the United States has periodically experienced trade restrictions based on the occurrence of LPAI virus being isolated from commercial poultry operations. As a result of these findings, birds have been depopulated and trade sanctions placed on U.S. poultry. In addition to these problems, other concerns are that the LPAI can mutate to highly pathogenic avian influenza (HPAI), and is a zoonotic concern. During the past two years, Asia has experienced numerous deaths in people infected by avian influenza virus.

As a result of these concerns, the poultry industry, in conjunction with federal and state regulators, are developing a H5/H7 LPAI program for commercial poultry.

For states to participate in this program, they must carry out three things.

1. Be a U.S. H5/H7 avian influenza monitored state under the current provisions of the National Poultry Improvement Plan (NPIP).
2. Develop a state diagnostic commercial bird surveillance program.



3. Develop a state H5/H7 LPAI response plan. The plan must be approved by USDA/APHIS.

Nebraska poultry producers, in conjunction with representatives from University of Nebraska Extension, Allied Industry representatives, USDA/APHIS/VS, and the Nebraska Department of Agriculture, are currently developing a LPAI program for Nebraska.

If you are interested in obtaining more information about the program, you can contact BAI at (402) 471-2351.

Canada Imports of Cattle, Bison, Sheep, and Goats

Even though we are still waiting to see if the movement of these animals from Canada to the United States will be allowed, we can start to educate and prepare ourselves concerning the requirements for these movements should they be allowed. In mid-February, USDA/APHIS/Veterinary Services published "Veterinary Services Memorandum #NO591-64" to lay out the implementation of requirements for these movements of these animals from Canada. Along with this document, USDA also published several memos to different groups, including one to importers, brokers, and other interested parties; one to feedlot owners and operators and other interested parties; and one to accredited veterinarians and other interested parties.

Since R-CALF won its preliminary injunction, these documents have been pulled from the USDA web site. It is unknown if these requirements will stay the same should the movements once again be allowed, but it would be wise for all of us to continue to monitor the USDA web site and be familiar with any requirements that Veterinary Services might publish if the movement of these animals is once again approved. The address for the USDA/APHIS web site is www.aphis.usda.gov. Once on this page, you can click on the tab for "Hot Issues" where they generally will post items of immediate concern.

News From Other States

South Dakota

- Trichomoniasis has been reported to affect five separate cattle herds in western South Dakota – three in Meade County and one each in Fall River and Pennington counties.
- Dairy cattle, other than steers and spayed heifers, entering South Dakota must be tested negative for tuberculosis within 60 days prior to entry.

Indiana

- A permit is required for all cattle, swine, cervids, members of the Camelidae family, sheep, and goats entering Indiana.

New York

- A disease outbreak at an equine facility in New York found horses affected with Potomac Horse Fever. Clinical signs of fever, depression, diarrhea, colic, laminitis, and death were invariably recognized. Of the 35 adult horses on the premises, 14 were diagnosed with the disease, and 4 deaths were attributed at the time of reporting.

Rabies Season

The 2005 rabies season (year to date through March 28, 2005) includes 11 positive animals. The total is broken down into six skunks, four bovine, and one horse. For comparison, the 2004 year to date diagnosed 24 positive animals. While still too early to tell if the peak year of the 7-10 year rabies cycle we are cautiously optimistic.



One area of concern is the number of cattle that are being diagnosed with rabies. Large animals that exhibit vague signs of disease are often not considered to be potentially rabid by the public. This often results in several people receiving the Post-Exposure Treatment after the owner, their neighbors, and veterinarians place unprotected hands into the animal's mouth.

Cattle may show the following signs:

- Paralytic symptoms most predominant
- Stand away from herd
- Dilated pupils
- Rough coat
- Somnolence or depression
- Stumbling

Excitation more rare:

- Muscle tremor, restlessness, sexual excitement appearance
- Hypersensitivity at site of bite
- Muscular incoordination
- Tonic-clonic contractions of head and neck muscles
- Difficulty swallowing- stop ruminating - Present as 'Choke'
- May show irritation of urogenital tract such as rectal straining
- Unusual pitch to bellowing
- May attack and butt any moving object
- May suspect at autopsy if aspiration pneumonia found

Nebraska statutes require that every dog or household pet cat be vaccinated for rabies by a licensed veterinarian (or supervised technician). It is illegal to sell rabies vaccine to non-veterinarians for this purpose in the state. Any animal given rabies vaccine by a non-veterinarian is considered unvaccinated if an exposure would occur.

Personnel Changes for BAI

In the recent past, BAI celebrated retirement farewells to three of its employees:

Jim Engler, a field inspector in the western part of the state; Arlen Riege, a field inspector in northeastern Nebraska; and Dr. Larry Williams, State Veterinarian since 1987. Their dedication and commitment to the work of the Nebraska Department of Agriculture were honored at individual receptions. Their contributions have been greatly appreciated.

New staff coming on board include Leo Wurdeman, who will be serving as a field inspector in the southeast area of the state; Chris Toft, who joined BAI's office in a staff assistant position; and Vanessa Rohrs, who came aboard to assist the Division with legal statute and regulation development.

DID YOU KNOW?

- Nebraska's livestock industry accounts for approximately 65% of the state's total agricultural receipts each year.
- There are nearly 22 million acres of rangeland and pastureland in Nebraska – half of which are in the Sandhills.
- Nebraska ranks # 1 in the nation in commercial livestock slaughter and commercial red meat production.
- Nebraska's farm and ranches utilize 45.9 million acres – 93% of the state's total land area.

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